

TWO NEW GENERA AND SEVEN NEW SPECIES OF ARADIDAE (HETEROPTERA)

NICHOLAS A. KORMILEV

5924 Gulfport Blvd., Gulfport, Florida 33707

Abstract.—The following new taxa are described: *Aphyseteres nasutus*. (Malaysia, Borneo); *Calisius borneensis* (Malaysia, Borneo); *Dimorphacantha borneensis*, (Malaysia, Borneo); *Froeschnerissa*, new genus for *Froeschnerissa heveli* (Malaysia, Borneo); *Glochocoris borneensis* (Malaysia, Borneo); *Heissia* new genus for *Heissia rotundata* (Nigeria), and *Notapictinus dollingi* (Costa Rica). The species *Calisius stappersi* Schouteden and its “var.?” are transferred to the genus *Heissia* as its second species. A key is given to separate the six known genera of *Calisiinae*.

I have had the privilege of studying a small but highly interesting lot of Aradidae through the kindness of the following individuals: H. M. André and G. Schmitz, Musée Royal d’Afrique Central, Tervuren, Belgium; W. R. Dolling, British Museum (Natural History), London, England; J. P. Duffels, Instituut voor Taxonomische Zoologie, Universitet van Amsterdam, Amsterdam, The Netherlands; Ernst Heiss, Innsbruck, Austria; and Gary P. Hevel, National Museum of Natural History, Smithsonian Institution, Washington, D.C. To these persons I express my sincere gratitude.

The two new genera, 7 new species and 1 new combination proposed herein pertain to the subfamilies Calisiinae, Carventinae, and Mezirinae.

All measurements were taken with a micrometer eyepiece, 25 units = 1 mm. In ratios the first figure represents the length and the second the width of the part measured. All measurements are in millimeters.

SUBFAMILY CALISIINAE

The subfamily Calisiinae is one of the oldest among Aradidae. In two genera, *Paracalisiopsis* Kormilev, 1963, and *Paracalisius* Kormilev, 1974, connexivum I is fully developed but in other genera of Calisiinae it is reduced to a triangular sclerite superimposed on connexivum II anteriorly. In the new genus *Heissia* connexivum VIII (♀) is fully developed, a character unique among the Aradidae.

KEY TO THE GENERA OF CALISIINAE

- | | |
|---|----------------------------|
| 1. Antenna simple, first three segments subequal in length, IV longer but without dispersed dots | 2 |
| – Antenna with first three segments moniliform, IV much longer and with dispersed dots | 3 |
| 2. External borders of connexivum with a double row of granules; connexivum VIII absent | <i>Calisius</i> Stål |
| – External borders of connexiva with granules in upper row and spicules in lower row; connexivum VIII present (♀) | <i>Heissia</i> , new genus |
| 3. Connexivum I triangular, placed in front of connexivum II | 4 |

- Connexivum I reduced to small triangular sclerite superimposed on Connexivum II anteriorly 5
- 4. Exterior borders of connexiva with a double row of granules. *Paracalisius* Kormilev
- Exterior borders of connexiva with a single row of flat teeth *Paracalisopsis* Kormilev
- 5. Pronotum trapezoidal, not constricted laterally; stridulatory apparatus absent *Calisiopsis* Champion
- Pronotum constricted laterally, forming two lobes; stridulatory apparatus present along outer posterior margin of metapleuron *Aradacanthia* Costa

Calisius Stål, 1860*Calisius borneensis*, new species

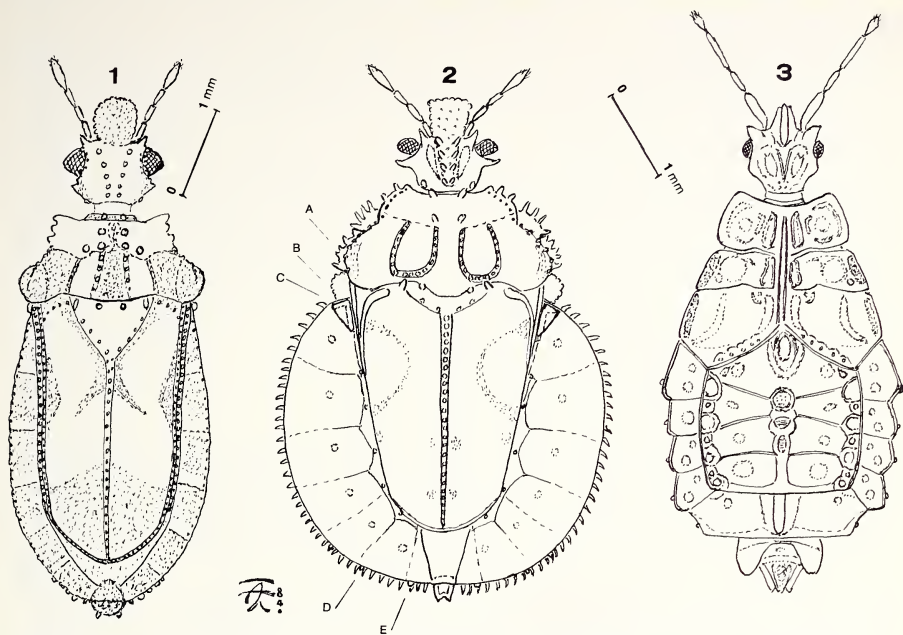
Fig. 1

Diagnosis. *Calisium borneensis* is related to *C. ashlocki* Kormilev from New Guinea, but differs in having the basal triangular elevation of scutellum with 2 (1 + 1) spicules and 2 (1 + 1) small granules between them; scutellar carina granulate along entire length; and lateral borders of scutellum and visible portion of corium granulate.

Description. Male. Ovale; head, pronotum, scutellum and connexivum, granulate. HEAD: almost as long as width across eyes (14:15); anterior process ovoid, rounded anteriorly, convex laterally and granulate, reaching $\frac{1}{2}$ of antennal segment III; antenniferous tubercles short, blunt, directed slightly downward; vertex with a double row of granules converging backward. Antennae short and thin, shorter than width of head (12.5:15); relative length of antennal segments I to IV are: 2.5:2.5:2.5:5. Labium extending to hind border of labial groove, which is closed posteriorly. PRONOTUM: trapezoidal, half as long as maximum width (12:25); lateral borders with a row of granules, 6 (3 + 3) on fore lobe and 4 (2 + 2) on hind lobe; middle carinae high, parallel, roughly granulate on fore lobe, less roughly on hind lobe; lateral carinae finely granulate, diverging on hind lobe. Fore disc very coarse on fore lobe, hind disc punctured between carinae. SCUTELLUM: less than twice as long as width at basal $\frac{1}{3}$ (35:20); basal triangular elevation with 2 (1 + 1) spicules anteriorly and with 2 (1 + 1) small granules between them; lateral borders of elevation and median carina granulate. Lateral borders of scutellum densely granulate along entire length. HEMELYTRA: corium appearing as a granulate carina laterad of scutellum reaching hind border of connexivum V. ABDOMEN: ovate, slightly longer (length of abdomen measured on ventral side) than its maximum width (28:26). Exterior borders of connexiva granulate; disc bicolored: black and yellow brown. Paratergites of VIII small, appearing bicuspidate because of granules. Hypopygium globose (7.5:12). Sternum VII with median depression. Spiracles II to VI ventral, VII and VIII lateral and visible from above. LEGS: trochanters free. COLOR: head black, vertex and antennae brown; pronotum red brown, black medially between inner carinae and outside of external carine; scutellum black on triangular elevation; 2 (1 + 1) sublateral elongate spots in middle and apical $\frac{1}{3}$ of disc, yellow brown; 2 (1 + 1) connecting elongate spots behind triangular elevation brown; trochanters yellow, femora and tibiae brown.

Measurements: Total length 2.80; width of pronotum 1.00; width of abdomen 1.04.

Holotype. ♂ MALAYSIA, Borneo, Sabah: 1 km S of Kundasang, 1,530 m, Aug. 24, 1983, G. F. Hevel and W. E. Steiner; deposited at the National Museum of Natural History, Washington, D.C.



Figs. 1-3. 1. *Calisius borneensis*, ♂, dorsal aspect. 2. *Heissia rotundata*, ♀, dorsal aspect. A—carina of the propleuron; B—metapleuron; C—connexivum I superimposed on II; D—spiracle of connexivum VII; E—spiracle of connexivum VIII. 3. *Frosechnerissa heveli*, ♀, dorsal aspect.

Heissia, new genus

Diagnosis. *Heissia* can be separated from other genera of Calisiinae by the fully developed connexivum VIII in the females; males are unknown.

Description. Female. Head, pronotum, scutellum, and exterior borders of connexivum with rows of granules or spicules; hind lobe of pronotum and disc of scutellum with rough punctures. HEAD: shorter than width across eyes; anterior process subtruncate anteriorly, its lateral borders converging backward, reaching tip of antennal segment II; antenniferous tubercles small, diverging; postocular long, slightly produced beyond outer border of eyes. Antennae short, shorter than width of head across eyes; first three antennal segments subequal in length, IV twice as long as III. Labium reaching hind border of labial groove, which is closed posteriorly. PRONOTUM: subtrapezoidal, less than half as long as maximum width; fore lobe much narrower than hind lobe; collar truncate; lateral borders of fore lobe with 4 (2 + 2) long spicules and a row of small granules above; lateral borders of hind lobe very convex, with a row of spicules, and above a row of granules in continuation of the rows of fore lobe; hind border roundly produced backward medially and twice sinuate sublaterally. Fore disc with 2 (1 + 1) long spicules behind collar and overhanging it; 2 (1 + 1) long spicules behind them at the hind border of fore lobe; 2 (1 + 1) large loops, formed by rows of semifused granules on hind disc. SCUTELLUM: longer than maximum width at base; lateral borders straight, converging backward, apex rounded; triangular elevation at base from which arises median carina; 2 (1 + 1) large granules

at front and laterad with 2 (1 + 1) large spicules overhanging hind border of pronotum; lateral borders of triangular elevation with a few large granules. Median carina with a row of large granules; lateral borders of scutellum carinate at base, then with a row of obscure granules, evanescent at $\frac{2}{3}$ of scutellum; disc densely, roughly punctured. HEMELYTRA: almost completely covered by scutellum, exterior border of corium visible at basal angle of scutellum and then produced backward as a carina until $\frac{3}{5}$ of scutellum. ABDOMEN: almost round, slightly shorter than maximum width across segment III; narrow portion of disc and a very wide connexivum appearing laterad of scutellum; segments of connexiva semifused, their limits obscured; reduced segment I superimposed on segment II anteriorly; each segment from II to VII bearing round callous spot in middle. Fully developed connexivum VIII placed between connexivum VII and tergum VIII in female, which is unique in Aradidae. Spiracles very small; II ventral, placed nearer to border; III to VI ventral, placed far from border; VII and VIII lateral, visible from above. Exterior borders of connexiva II to VIII with a double row of granules (upper row), and spicules (lower row). Ventral side: propleuron with a high, denticulate carina medially, partially visible from above. Meso- and metapleura granulate. Pro- and mesosternum slightly depressed medially; metasternum flat, with hind border deeply and roundly cut out medially, forming 2 (1 + 1) large, rounded promontories laterad of median sinus. Hind borders of sterna III to VI angularly cut out medially. LEGS: trochanters free; femora fusiform, unarmed; fore tibiae with a small comb subapically; claws with arolia.

Type species. Heissia rotundata, new species.

Etymology. Heissia, new genus, named in honor of my friend Ernst Heiss.

***Heissia rotundata*, new species**

Fig. 2

Description. Female. Ratios: head 25:29; relative length of antennal segments I to IV: 5:5.5:5:10; pronotum 25:63; fore lobe to hind lobe of pronotum 38:63; scutellum 65:50; abdomen 80:87. COLOR: head, fore lobe of pronotum and connexivum, orange, the latter with red exterior borders; hind lobe of pronotum and scutellum ivory with some brown spots. Ventral side orange; venter pale medially.

Measurements: Total length 5.40; width of pronotum 2.52; width of abdomen 3.48.

Holotype. ♀ NIGERIA, Udo Fr. M State W, 11.IV.1975, J. T. Medler, deposited at the Heiss collection, Innsbruck, Austria.

***Heissia stappersi* (Schouteden), New Combination**

Calisius stappersi Schouteden, 1919, 7:65.

Diagnosis. Female. Similar to *Heissia rotundata* but longer and narrower, ratio length:width of the body 1.60:1 (in *H. rotundata* 1.55:1); abdomen more ovate, as long as maximum width, ratio 95:95 (in *H. rotundata* shorter than wide 80:87); anterior process of head rounded anteriorly (in *H. rotundata* subtruncate). Color more reddish brown, with hind lobe of pronotum and scutellum almost white with reddish-brown spots. Ratios: Head 30:33; relative length of antennal segments I to IV are: 6:6.5:5.5:10; pronotum 32:65; scutellum 72:55; abdomen 95:95.

Measurements: Total length 6.08; width of pronotum 2.60; width of abdomen 3.80.

Calisius stappersi var.? belongs to the same species; it is only slightly larger, but of the same color.

Ratios: Head 33:34; relative length of antennal segments I to IV are: 5.5:7:5.5:10; pronotum 33:65; scutellum 73:57; abdomen 96:95.

Specimens examined. ♀, (Belgian Congo) ZAIRE, Petite Plaine de Tembwe; 23.VI.1912, Dr. Stappers; holotype of Schouteden, deposited in the Musée Royal d'Afrique Centrale, Tervuren, Belgium. ♀, ZAIRE, Albertville, Fine I.1933, L. Burgeon, "*Calisius stappersi* var.?" ; deposited in Tervuren.

SUBFAMILY CARVENTINAE

Froeschnerissa, new genus

Diagnosis. *Froeschnerissa* is related to *Kolpodaptera* Usinger and Matsuda, 1959, but may be separated from it by the pentagonal central dorsal plate (subrectangular in *Kolpodaptera*), by the dorsum mostly covered by maze of tiny, irregular carinae and punctures and by posteroexterior angles of connexivum VII not produced backward.

Description. Apterous, covered with light brown incrustation; dorsum with a mesh of tiny, irregular carinae and punctures. HEAD: longer than width across eyes; anterior process tricuspidate, clypeus slightly longer than jugae, slightly shorter than half of antennal segment I; antenniferous tubercles slightly declivous; postocular borders slightly inflated behind eyes, then straight and converging, without tubercles; eyes small, deeply inserted into head. Antennae short, less than twice as long as width of head; antennal segment I as long as III and II as long as IV. Labium preapical, arising from splitlike atrium, not reaching hind border of labial groove, which is closed posteriorly. PRONOTUM: less than half as long as maximum width; collar distinct; anterolateral angles angularly rounded anteriorly and inflated on disc; lateral borders straight, diverging backward. Disc narrowly depressed medially, with narrow, double carina in the depression continuing posteriorly across meso- and metanotum and terga I and II until central dorsal plate. Pronotum separated from mesonotum, laterad of median carina, by 2 (1 + 1) oblique sulci. MESONOTUM: shorter and wider than pronotum; median carina flanked by 2 (1 + 1) longitudinal, glabrous elevations and further laterad with a maze of tiny, irregular carinae and punctures. Lateral borders convex, raised exteriorly. Mesonotum separated from metanotum, laterad of median carina, by 2 (1 + 1) deep, curved sulci. METANOTUM: shorter and wider than mesonotum, fused posteriorly with terga I and II. Disc longitudinally raised sublaterally. ABDOMEN: ovate, longer than maximum width across segment III, divided into three plates: first plate consisting of terga I and II fused with metanotum; second plate (=central dorsal plate), consisting of terga III to VI, and third plate of tergum VII. All three plates separated from each other, second plate also from connexivum, by deep sulci. Central dorsal plate raised medially on tergum III forming a high elevation in the shape of a rhomb; laterad of rhomb tergum III with 2 (1 + 1) round callous spots; tergum IV with 2 (1 + 1) subtriangular depressions, limited by carinae and further laterad with 4 (2 + 2) round callous spots; posteriorly

near hind border, medially, small round depression, surrounded by carinae and with a few granules on disc. Tergum V sloping backward, with two scent gland scars medially, laterad of scars with 2 (1 + 1) transverse depressions, with discs covered with maze of tiny carinae and punctures; 2 (1 + 1) round callous spots in the middle of these depressions and 4 (2 + 2) round callous spots further laterad. Tergum VI with double median carina flanked by 2 (1 + 1) subtriangular depressions and further laterad by 4 (2 + 2) round callous spots. Tergum VII is raised and carinate medially. Connexiva II and III fused, other separated by thin sulci. Each connexivum with 2 round callous spots. Exterior borders of connexivum finely carinate. Tergum VIII (♀) semicircular, transversely sulcate, paratergites conical, reaching $\frac{1}{2}$ of tricuspidate segment IX. Spiracles II ventral, placed far from margin, III to VII lateral, visible from above, VIII ventral, not visible from above. Pro-, meso- and metasternum flat and smooth medially, Pleurae rugose. LEGS: trochanters fused with femora; fore tibiae with a small comb; claws with arolia.

Type species. Froeschnerissa heveli, new species.

Etymology. This new genus is named in honor of my friend, Richard C. Froeschner, for his seventieth birthday.

Froeschnerissa heveli, new species

Fig. 3

Description. Female. Elongate ovate, narrowing anteriorly. Ratios: head 24:22; relative length of antennal segments 12:7:12:7.5; pronotum 15:35; mesonotum 10:47; metanotum 5:56; abdomen 77:68; width of tergum VIII 15. COLOR: brown to dark brown, covered by light brown incrustation.

Measurements: Total length 5.32; width of pronotum 1.40; width of abdomen 2.72.

Holotype. ♀ MALAYSIA, Borneo, Sabah, Kinabalu National Park, summit trail, Pak Cave to Panar Laban, 3,200–3,500 m; 16.IX.1983. G. & J. Hevel and W. Steiner; deposited at the National Museum of Natural History, Washington, D.C.

Paratype. ♀, collected with holotype; deposited in the Kormilev collection.

Etymology. The species is named for its collector Gary F. Hevel of the Smithsonian Institution.

SUBFAMILY MEZIRINAE

Aphyseteres Usinger and Matsuda, 1959

Aphyseteres nasutus, new species

Fig. 4

Diagnosis. *Aphyseteres nasutus* can be separated from *A. borneensis* Usinger and Matsuda, 1959, by the extremely long and tapering anterior process of head.

Description. Male. Ovate, apterous covered with dense, brown tomentum. HEAD: longer than width across eyes (100:67); anterior process very long, tapering, tip incised, reaching $\frac{1}{2}$ of antennal segment I; antenniferous tubercles short, blunt. Eyes semiglobose, placed in middle of front half of head; postocular borders straight, converging backward, without postocular tubercles. Vertex raised, elevation forked around base of clypeus. Antennae stout and long, 2.3 times as long as width of head

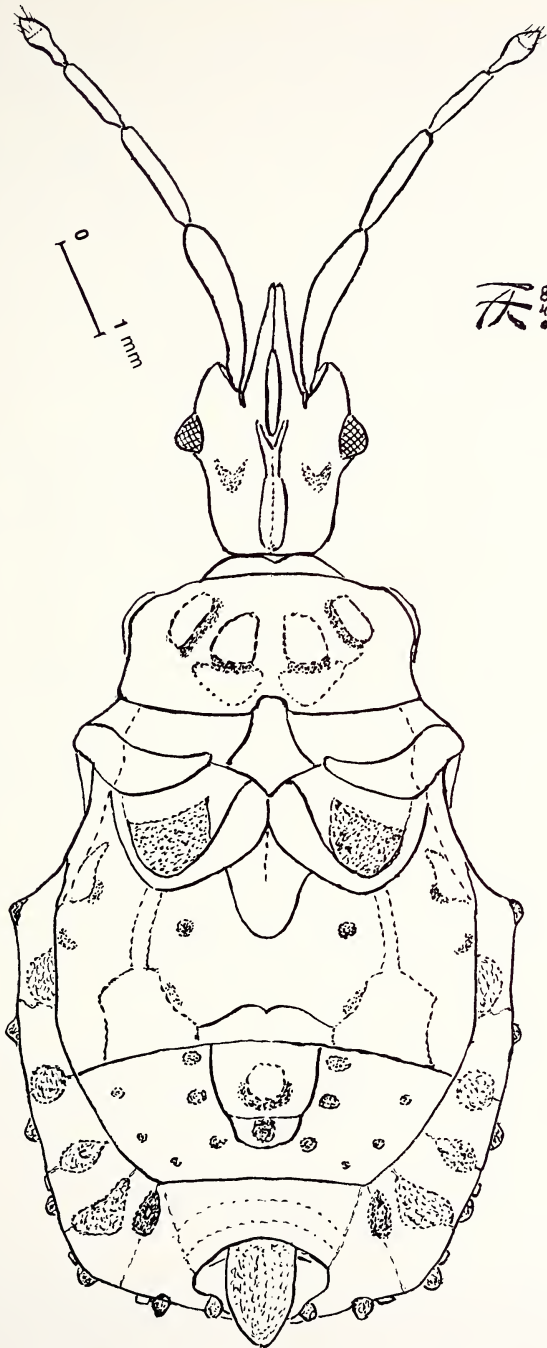


Fig. 4em/4. *Aphyseteres nasutus*, ♂, dorsal aspect.

across eyes; relative length of antennal segments I to IV 60:43:28:22. Labium arising from splitlike atrium, not reaching hind border of labial groove, which is open posteriorly. PRONOTUM: short and wide (50:108); collar slightly incised in middle; disc with 2 (1 + 1) large and high, ovate ridges, flanked by 2 (1 + 1) small and thin ridges; 2 (1 + 1) curved, transverse ridges behind large ridges, separated from each other by a depression., Hind border of pronotum convex laterally, sinuate medially. MESONOTUM: short and wide (20:136), elevated medially, elevation flanked by 2 (1 + 1) depressions, with 2 (1 + 1) high tubercles above scent gland openings. Mesonotum separated from metanotum by thin, transverse sulcus. Metanotum split by tergum I into 2 (1 + 1) semicircular plates connected laterally with lateral tubercles of mesonotum. ABDOMEN: longer than maximum width across segment II (193:183). Tergum I small heart-shaped, separated from tergum II by 2 (1 + 1) thin oblique sulci. Tergum II large, strongly raised medially, with a thin median sulcus, flanked by 2 (1 + 1) oblique ridges; laterad of ridges with 2 (1 + 1) large, crescent-shaped, smooth, black spots, surrounded posteriorly by semicircular ridge, extending from oblique ridges. Tergum III strongly raised medially (highest point of abdomen), sloping laterally, with 2 (1 + 1) short, longitudinal, sublateral ridges. Tergum IV flat, lower medially than media elevation of tergum III, but strongly raised into 2 (1 + 1) high ridges sublaterally. Tergum V with high elevation medially, bearing traces of scent glands, strongly sloping laterally, external portion flat and low. Tergum VI strongly sloping medially from media elevation of tergum V, flat and low laterally. Central dorsal plate (terga II to VI) separated from connexivum and tergum VII by deep sulci. Tergum VII strongly raised medially for the reception of hypopygium, sloping laterally toward connexivum. Paratergites of VIII small, tuberclelike, with large, lateral spiracle. Hypopygium large (39:45), with strong median ridge overhanging hind border posteriorly. Connexivum II produced forward, touching upper end of metathoracic scent gland opening. Connexiva III to VII raised on posterior half, with salient tubercle on anterior half laterally. Spiracle II not visible; III to IV ventral, placed far from border, V to VII sublateral, slightly visible from above; VIII lateral. LEGS: long, unarmed; smooth, ovate spot in front of hind acetabula; femora cylindrical, slightly enlarged apically; front tibiae with white comb subapically; tarsi short; claws without arolia. COLOR: black, but most of body covered with dense, brown tomentum; apical half of antennal segment IV and claws yellow brown; eyes white with yellow tinge.

Measurements: Total length 14.52; width of pronotum 4.32; width of abdomen 7.32.

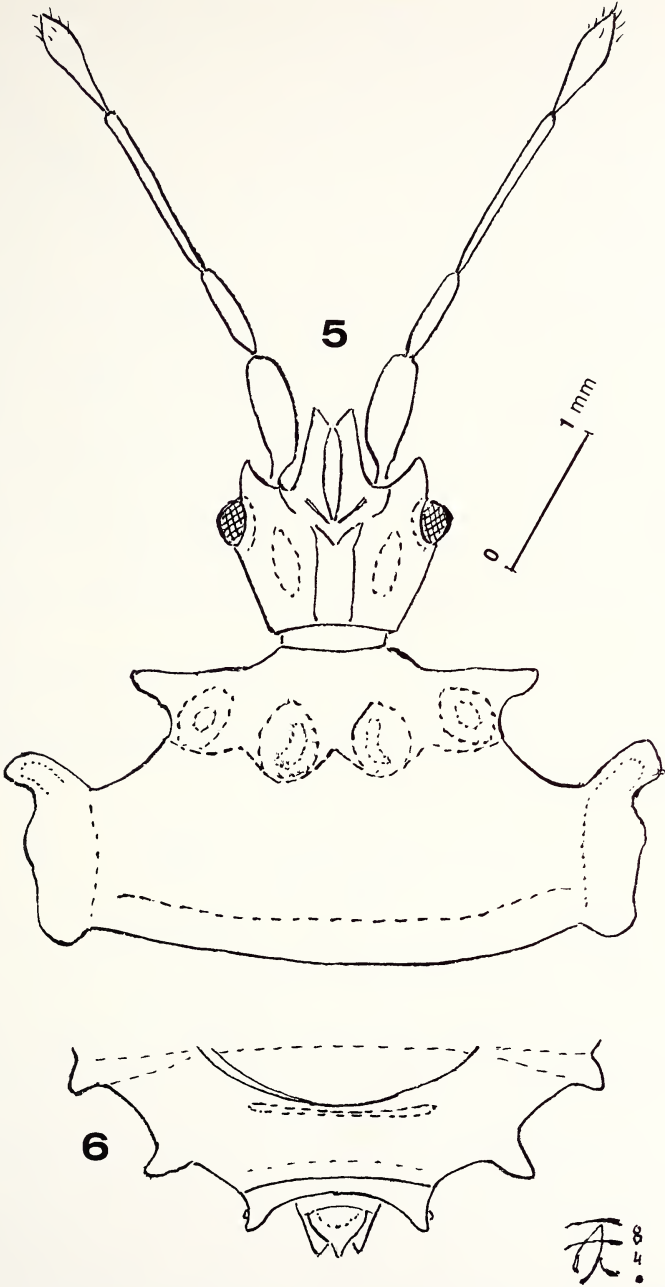
Holotype. ♂ C. BORNEO, Mt. Tibang, 1,500 m, 1925, Mjoberg coll., Dr. D. Mac Gillavry collection; deposited at the Amsterdam Museum of Natural History.

Dimorphacantha Usinger and Matsuda, 1959

***Dimorphacantha borneensis*, new species**

Figs. 5, 6

Diagnosis. Previously *Dimorphacantha* had five species, two of which were brachypterous. The sixth species *D. borneensis*, is related to *D. distincta* Usinger and Matsuda, 1959, from Borneo, but is larger, the relative length of antennal segments is different, segment II is as long as IV, and the pronotal spines are more produced.



Figs. 5, 6. 5. *Dimorphacantha borneensis*, ♀. Head and pronotum. 6. Apex of abdomen from above.

Description. Female. Elongate ovate, granulate. HEAD: slightly shorter than width across eyes (35:37); anterior process cleft, jugae acute, longer than clypeus, reaching $\frac{1}{2}$ of antennal segment I; antenniferous tubercles acute, parallel; postocular borders straight, converging backward, without tubercles. Vertex with 2 (1 + 1) thin, parallel ridges. Antennae stout, more than twice as long as width of head across eyes (83:37); relative length of antennal segments I to IV 23:15:30:15. Labium not reaching hind border of labial groove, which is closed posteriorly. PRONOTUM: less than half as long as maximum width across posterior spines (50:108); fore lobe narrower than hind lobe (67:108); fore disc sulcate medially, with 4 (2 + 2) semiobliterated ridges; hind disc dispersely granulate. Fore disc with 2 (1 + 1) long, blunt processes, directed somewhat obliquely sideways; hind disc with similar, but stronger and longer processes. SCUTELLUM: shorter than basal width (50:60); lateral borders sinuate, tip rounded; disc with sharp, narrow median ridge, transversely rugose laterad of it. HEMELYTRA: reaching $\frac{2}{3}$ of tergum VII; corium reaching hind border of connexivum II, its apical angle blunt, apical border sinuate; membrane with anastomosed veins. ABDOMEN: ovate, shorter than maximum width across segment IV (96:112); lateral borders evenly rounded; posteroexterior angles of connexiva II to VI produced as blunt spines; VII larger than others and directed obliquely sideways. Spiracles II to VII ventral, not visible from above; VIII ventrolateral, slightly visible from above. Paratergites of VIII angular, reaching half of tricuspidate segments IX. LEGS: all femora with strong subapical spines. COLOR: black, apical half of antennal segment IV brown.

Measurements: Total length 8.80; width of pronotum 4.40; width of abdomen 4.48.

Holotype. ♀ MALAYSIA, Borneo, Sabah: Kinabalu National Park, Headquarters Area, 1,560 m; 6.IX.1983; G. F. Hevel and W. E. Steiner; deposited at the National Museum of Natural History, Washington, D.C.

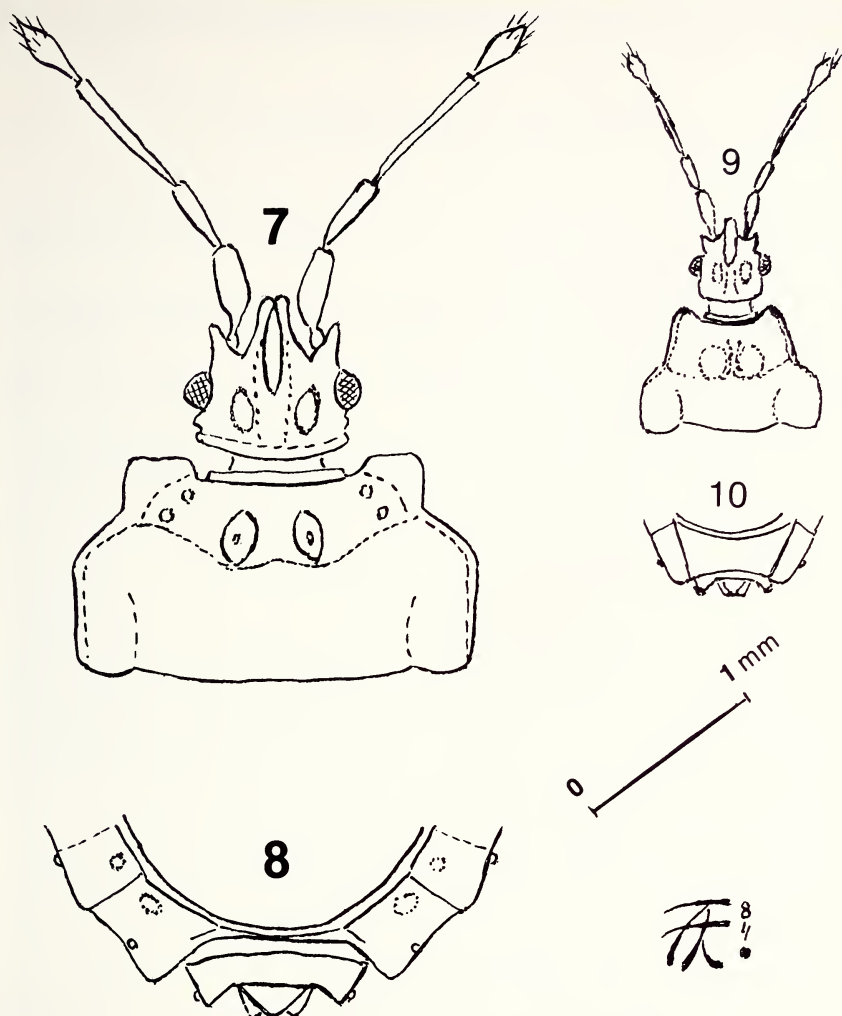
Glochocoris Usinger and Matsuda, 1959

***Glochocoris borneensis*, new species**

Figs. 9, 10

Diagnosis. *Glochocoris borneensis*, new species, is related to *G. elongatus* Kormilev, 1960, but is larger, the antennae are relatively longer (2.55 times as long as width of head across eyes, 2.2 times in *G. elongatus*), and the abdomen is relatively narrower.

Description. Female. Elongate, slightly widening posteriorly; head and pronotum with dispersed granulation. HEAD: as long as width across eyes (11:11); anterior process tricuspidate anteriorly, reaching basal $\frac{2}{3}$ of antennal segment I; antenniferous tubercles short, blunt, diverging; postocular borders rounded; vertex raised medially, with 2 (1 + 1) elongate callosities. Antennae 2.55 times as long as width of head across eyes (28:11); relative length of antennal segments I to IV 7:5:9:7. Labium reaching hind border of labial groove, which is closed posteriorly. PRONOTUM: shorter than maximum width (15:25); collar sinuate anteriorly; anterolateral angles rounded; lateral borders convex anteriorly and posteriorly, sinuate in middle, parallel at humeri; hind border sinuate. Fore disc with median sulcus, flanked by 2 (1 + 1) round callosities; hind disc transversely raised. SCUTELLUM: missing. HEMELYTRA: Corium with two veins forming a cell; membrane without veins. ABDOMEN:



Figs. 7-10 7. *Notapictinus dollingi*, ♀. 7. Head and pronotum. 8. Apex of abdomen from above. *Glochocoris borneensis*, ♀. 9. Head and pronotum. 10. Apex of abdomen from above.

MEN: elongate-ovate, longer than maximum width (47:28); posteroexterior angles of connexiva not protruding; tergum VIII as wide as width of head across eyes (11:11); paratergites of VIII truncate, reaching $\frac{2}{3}$ of truncate segment IX. Spiracles II concealed; III and IV ventral; V to VII sublateral, slightly visible from above; VIII lateral, visible from above. COLOR: testaceous, eyes brown.

Measurements: Total length 3.52; width of pronotum 1.00; width of abdomen 1.12.

Holotype. ♀ N BORNEO, Samawang near Sandakan, Jungle, 12.VII.1927; ex F.

M. S. Museum, B M. 1955-354; deposited at the British Museum (Natural History) London.

Notapictinus Usinger and Matsuda, 1959

***Notapictinus dollingi*, new species**

Figs. 7, 8

Diagnosis. *Notapictinus dollingi* runs in my key (1967:7-9) to *N. paramaculatus* Kormilev, 1960, but is larger, antennal segment IV is relatively shorter, and spiracles VI are lateral and VII dorsolateral.

Description. Female. Elongate-ovate; head and pronotum very finely punctured; connexivan bicolored brown and yellow. HEAD: slightly shorter than width across eyes (22:23); anterior process slightly incised anteriorly, jugae longer than clypeus, reaching basal $\frac{2}{3}$ of antennal segment I; antenniferous tubercle subacute parallel; postocular minute, not reaching outer border of eyes; vertex with 2 (1 + 1) ovate infraocular callosities. Antennae 2.3 times as long as width of head across eyes (53:23); relative length of antennal segments I to IV 13:10:20:10. Labium extending to hind border of labial groove, which is closed posteriorly. PRONOTUM: shorter than maximum width (27:53); fore lobe narrower than hind lobe (40:53); collar truncate anteriorly; anterolateral angles expanded into large rectangular lobes, produced forward beyond collar, fore border sinuate laterad of collar, then truncate; lateral borders of fore lobe parallel; lateral notch forming obtuse angle; lateral borders of hind lobe parallel at humeri, converging anteriorly; hind border weakly convex. Fore disc with 2 (1 + 1) ovate callosities, 4 (2 + 2) small, round callosities laterad of them; hind disc with fine, dispersed granulation. SCUTELLUM: shorter than basal width (20:30); lateral borders straight, carinate; median ridge robust, narrowing posteriorly not reaching tip of disc; the latter roughly, transversely rugose. HEMELYTRA: almost reaching hind border of tergum VII; corium reaching $\frac{1}{2}$ of connexivum III, outer border produced backward into long, narrow point; membrane with irregular veins, appearing wrinkled. ABDOMEN: ovate, longer than maximum width across segment IV (82:67); connexiva II and III fused; posteroexterior angles of connexiva protruding. Spiracles II to V ventral, far from margin; VI lateral, visible from above; VII dorso-lateral; VIII lateral. Tergum VIII (♀) as wide as width of head across eyes (23:23). LEGS: femora finely serrate inferiorly. COLOR: head, antennae, pronotum (with exception of yellow anterolateral lobes), scutellum, clavus, corium, and legs red brown; connexiva red brown, yellow anteriorly.

Measurements: Total length 6.20; width of pronotum 2.12; width of abdomen 2.68.

Holotype. ♀ COSTA RICA, Turialba, Catie/iica Research Station; 24-30.VII.1981, W. R. Dolling, 1981-411; deposited in the British Museum (Natural History), London.

Etymology. It is a pleasure to dedicate this species to the collector, W. R. Dolling.

LITERATURE CITED

- Champion, G. C. 1898. Aradidae. In: F. D. Godman and O. Salvin, *Biologia Centrali-Americana*, Insects. Rhynchota 2:65-117.

- Costa, A. 1864. Generi e specie d'insetti della fauna Italiana. Ann. Mus. Zool. Napolitani 2: 142, Lam. I.
- Kormilev, N. A. 1960. Notes on Neotropical Aradidae XI (Hemiptera). J. New York Entomol. Soc. 68:208-220.
- Kormilev, N. A. 1960. Notes on Aradidae from the Eastern Hemisphere. XVII (Hemiptera). Quart. J. Taiwan Mus. 13:163-174.
- Kormilev, N. A. 1963. On some Calisiinae in the British Museum (Nat. Hist.) (Hemiptera-Heteroptera, Aradidae.) Ann. Mag. Nat. Hist., ser. 13, 5:601-607.
- Kormilev, N. A. 1967. On some Aradidae from Brasil, Argentina and Laos (Hemiptera, Heteroptera). Opusc. Zool. 100:1-10.
- Kormilev, N. A. 1974. A new genus of Calisiinae from Kameroon (Hemiptera, Aradidae). EOS Rev. Espan. Ent. 48:295-299.
- Schouteden, D. 1919. Un "*Calisius*" nouveau du Congo (Hem. Aradidae). Rev. Zool. Bot. Afr. 7:65-66.
- Stål, C. 1860. Bidrag till Rio Janeiro-traktens Hemipter Fauna. Kong. Svens. Vet.-Akad. Handl. 2(7):66-68.
- Usinger, R. L. and R. Matsuda. 1959. Classification of the Aradidae (Hemiptera-Heteroptera). British Museum, London, vii + 410 pp.